K 7

```
RRRRRRRRRRRR     UUU         UUU  NNN         NNN     000000000     FFFFFFFFFFFFFFF  FFFFFFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN         NNN     000000000     FFFFFFFFFFFFFFF  FFFFFFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN         NNN     000000000     FFFFFFFFFFFFFFF  FFFFFFFFFFFFFFF
RRR         RRR  UUU         UUU  NNN         NNN  000         000  FFF              FFF
RRR         RRR  UUU         UUU  NNN         NNN  000         000  FFF              FFF
RRR         RRR  UUU         UUU  NNN         NNN  000         000  FFF              FFF
RRR         RRR  UUU         UUU  NNNNNN      NNN  000         000  FFF              FFF
RRR         RRR  UUU         UUU  NNNNNN      NNN  000         000  FFF              FFF
RRR         RRR  UUU         UUU  NNNNNN      NNN  000         000  FFF              FFF
RRRRRRRRRRRR     UUU         UUU  NNN   NNN   NNN  000         000  FFFFFFFFFFFF     FFFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN   NNN   NNN  000         000  FFFFFFFFFFFF     FFFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN   NNN   NNN  000         000  FFFFFFFFFFFF     FFFFFFFFFFFF
RRR   RRR        UUU         UUU  NNN      NNNNNN  000         000  FFF              FFF
RRR   RRR        UUU         UUU  NNN      NNNNNN  000         000  FFF              FFF
RRR   RRR        UUU         UUU  NNN      NNNNNN  000         000  FFF              FFF
RRR      RRR     UUU         UUU  NNN         NNN  000         000  FFF              FFF
RRR      RRR     UUU         UUU  NNN         NNN  000         000  FFF              FFF
RRR      RRR     UUU         UUU  NNN         NNN  000         000  FFF              FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN         NNN     000000000     FFF              FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN         NNN     000000000     FFF              FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN         NNN     000000000     FFF              FFF
```

```
_$2

Sym
---
NDX
NDX
NUM
NUM
OPE
OUT
PAC
PAC
PAC
PAC
PAC
PAC
PAC
PAD
PAG
PAG
PAG
PAG
PAG
PAG
PAG
PER
PUT
RCO
RIN

RLI
RNO
RNO
RTY
SAV
STR
STR
STR
STR
STR
STR

STR
STR
STR
STR
STK
STR
STR
STR
STR
STR
STR
STR
STR
STR
```

E 16

FILEID**GCODE

```
  GGGGGGGG    CCCCCCCC    OOOOOO    DDDDDDDD    EEEEEEEEEE
  GGGGGGGG    CCCCCCCC    OOOOOO    DDDDDDDD    EEEEEEEEEE
GG          CC          OO      OO  DD      DD  EE
GG          CC          OO      OO  DD      DD  EE
GG          CC          OO      OO  DD      DD  EE
GG          CC          OO      OO  DD      DD  EE
GG          CC          OO      OO  DD      DD  EEEEEEEE
GG          CC          OO      OO  DD      DD  EEEEEEEE
GG  GGGGGG  CC          OO      OO  DD      DD  EE
GG  GGGGGG  CC          OO      OO  DD      DD  EE
GG      GG  CC          OO      OO  DD      DD  EE              ....
GG      GG  CC          OO      OO  DD      DD  EE              ....
  GGGGGG      CCCCCCCC    OOOOOO    DDDDDDDD    EEEEEEEEEE      ....
  GGGGGG      CCCCCCCC    OOOOOO    DDDDDDDD    EEEEEEEEEE      ....

LL            IIIIII      SSSSSSSS
LL            IIIIII      SSSSSSSS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II        SSSSSS
LL              II        SSSSSS
LL              II              SS
LL              II              SS
LL              II              SS
LL              II              SS
LLLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLLL    IIIIII    SSSSSSSS
```

```
  0 MODULE gcode (  IDENT = 'V04-000'
P 0                 %BLISS32[, ADDRESSING_MODE (EXTERNAL    = LONG_RELATIVE,
  0                                             NONEXTERNAL = LONG_RELATIVE)]
  0                 ) =
  1 BEGIN
  1 !
  1 !****************************************************************************
  1 !*                                                                          *
  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                 *
  1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                  *
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  1 !*                                                                          *
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  1 !*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT   *
  1 !*  CORPORATION.                                                            *
  1 !*                                                                          *
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  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                 *
  1 !*                                                                          *
  1 !*                                                                          *
  1 !****************************************************************************
  1 !
  1
  1 !++
  1 ! FACILITY:     DSR (Digital Standard RUNOFF) / DSRPLUS
  1 !
  1 ! ABSTRACT:     Generates intermediate code for paper positioning.
  1 !
  1 ! ENVIRONMENT:  Transportable
  1 !
  1 ! AUTHOR:       R.W.Friday       CREATION DATE: June, 1978
  1
```

```
;    41           0040  1 %SBTTL 'Revision History'
;    42           0041  1 ! MODIFIED BY:
;    43           0042  1 !
;    44           0043  1 !         009     RER00009        Ron Randall     17-Mar-1983
;    45           0044  1 !                 For DSRPLUS:  Added code related to topnote tests.
;    46           0045  1 !
;    47           0046  1 !         008     RER00008        Ron Randall     07-Mar-1983
;    48           0047  1 !                 Global edit of all modules. Updated module names, idents,
;    49           0048  1 !                 copyright dates. Changed require files to BLISS library.
;    50           0049  1 !--
;    51           0050  1
;    53            0051   1 %SBTTL 'Module Level Declarations'
;    54            0052   1 !
;    55            0053   1 ! TABLE OF CONTENTS:
;    56            0054   1 !
;    57            0055   1 FORWARD ROUTINE
;    58            0056   1     gcpage        : NOVALUE,
;    59            0057   1     gcpos         : NOVALUE,
;    60            0058   1     gcskip        : NOVALUE,
;    61            0059   1     gtpc          : NOVALUE,
;    62            0060   1     guskip        : NOVALUE;
;    63            0061   1
;    64            0062   1 !
;    65            0063   1 ! INCLUDE FILES:
;    66            0064   1 !
;    67            0065   1 LIBRARY 'NXPORT:XPORT';                       ! XPORT Library
;    68            0066   1 REQUIRE 'REQ:RNODEF';                         ! RUNOFF variant definitions
;    69            0197   1
;    70          U 0198   1 %IF DSRPLUS %THEN
;    71          U 0199   1 LIBRARY 'REQ:DPLLIB';                         ! DSRPLUS BLISS Library
;    72            0200   1 %ELSE
;    73            0201   1 LIBRARY 'REQ:DSRLIB';                         ! DSR BLISS Library
;    74            0202   1 %FI
;    75            0203   1
;    76            0204   1 !
;    77            0205   1 ! EXTERNAL REFERENCES:
;    78            0206   1 !
;    79            0207   1 EXTERNAL LITERAL
;    80            0208   1     rintes        : UNSIGNED (8);
;    81            0209   1
;    82            0210   1 EXTERNAL
;    83            0211   1     fnct          : fnct_definition,
;    84            0212   1     gca           : gca_definition,
;    85            0213   1     irac          : irac_definition,
;    86            0214   1     mra           : REF FIXED_STRING,
;    87            0215   1     sca           : sca_definition,
;    88            0216   1     tsf           : tsf_definition;
;    89            0217   1
;    90          U 0218   1 %IF DSRPLUS %THEN
;    91          U 0219   1 EXTERNAL
;    92          U 0220   1     topnot        : tn_definition;
;    93            0221   1 %FI
;    94            0222   1
;    95            0223   1 EXTERNAL ROUTINE
;    96            0224   1     outcrg;
;    97            0225   1
;   99          0226  1 GLOBAL ROUTINE gcpage : NOVALUE =
;  100          0227  1
;  101          0228  1 !++
;  102          0229  1 ! FUNCTIONAL DESCRIPTION:
;  103          0230  1 !
;  104          0231  1 !       Generates code for starting a new page, if not already
;  105          0232  1 !       at the top of a page.
;  106          0233  1 !
;  107          0234  1 ! FORMAL PARAMETERS:     None
;  108          0235  1 !
;  109          0236  1 ! IMPLICIT INPUTS:       None
;  110          0237  1 !
;  111          0238  1 ! IMPLICIT OUTPUTS:      None
;  112          0239  1 !
;  113          0240  1 ! ROUTINE VALUE:
;  114          0241  1 ! COMPLETION CODES:      None
;  115          0242  1 !
;  116          0243  1 ! SIDE EFFECTS:          None
;  117          0244  1 !--
;  118          0245  1
;  119          0246  2     BEGIN
;  120          0247  2
;  121          0248  2     IF  .fnct_collecting                            ! Don't start a new page if
;  122          0249  2     THEN                                            ! footnotes are being collected,
;  123          0250  2         RETURN;                                     ! since footnotes all belong on
;  124          0251  2                                                     ! one page.
;  125          0252  2     fs_wchar (mra, rintes);
;  126          0253  2     fs_wchar (mra, %C'p');
;  127          0254  2     fs_wchar (mra, %C' ');
;  128          0255  2     tsf_int_vl = .tsf_int_vl + 3;
;  129          0256  1     END;                                            ! End of GCPAGE


                                                                      .TITLE  GCODE
                                                                      .IDENT  \V04-000\

                                                                      .EXTRN  RINTES, FNCT, GCA
                                                                      .EXTRN  IRAC, MRA, SCA, TSF
                                                                      .EXTRN  OUTCRG

                                                                      .PSECT  $CODE$,NOWRT,2

                                         0000 00000                   .ENTRY  GCPAGE, Save nothing                     ; 0226
                  33 00000000G    EF   E8 00002                       BLBS    FNCT+20, 1$                              ; 0248
                  50 00000000G    EF   D0 00009                       MOVL    MRA, R0                                  ; 0252
                  51        04    A0   9E 00010                       MOVAB   4(R0), R1                                ;
            00    B1       00G    8F   90 00014                       MOVB    #RINTES, @0(R1)                          ;
                                  61   D6 00019                       INCL    (R1)                                     ;
                            0C    A0   D6 0001B                       INCL    12(R0)                                   ;
            00    B1        70    8F   90 0001E                       MOVB    #112, @0(R1)                             ; 0253
                                  61   D6 00023                       INCL    (R1)                                     ;
                            0C    A0   D6 00025                       INCL    12(R0)                                   ;
            00    B1              20   90 00028                       MOVB    #32, @0(R1)                              ; 0254
                                  61   D6 0002C                       INCL    (R1)                                     ;
                            0C    A0   D6 0002E                       INCL    12(R0)                                   ;
                  50 00000000G    EF   D0 00031                       MOVL    TSF, R0                                  ;
            18    A0              03   C0 00038                       ADDL2   #3, 24(R0)                               ; 0255
```

```
                                              04 0003C 1$:      RET                                                    ; 0256

; Routine Size:  61 bytes,    Routine Base:  $CODE$ + 0000

;  130           0257  1
```

```
1 GLOBAL ROUTINE gcpos (position) : NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !           Generates code to position to a particular line on a page.
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !           position - Indicates which line is to be positioned to.
1 !                      Negative means from the bottom of the page;
1 !                      positive means from the top.
1 !
1 ! IMPLICIT INPUTS:      None
1 !
1 ! IMPLICIT OUTPUTS:     None
1 !
1 ! ROUTINE VALUE:
1 ! COMPLETION CODES:     None
1 !
1 ! SIDE EFFECTS:         None
1 !--
1
2     BEGIN
2     LOCAL
2         tsf_phregs : REF VECTOR [tsf_nregs];
2
2     !
2     ! Don't go anywhere if footnotes are being collected.  Leave
2     ! the paper positioned where it is.
2     !
2     IF  .fnct_collecting
2     THEN
2         RETURN;
2
2     tsf_phregs = tsf__phregs;
2
2     IF  .tsf_next_reg GEQ tsf_nregs
2     !
2     ! Be sure not to allocate too many "registers".
2     !
2     THEN
2         outcrg ();
2
2     tsf_phregs [.tsf_next_reg] = .position;
2     fs_wchar (mra, rintes);
2     fs_wchar (mra, %C'g');
2     fs_wchar (mra, .tsf_next_reg);
2     tsf_int_vl   = .tsf_int_vl + 3;
2     tsf_next_reg = .tsf_next_reg + 1;
2     tsf_bar_char = .sca_bar_char;            ! Propogate change bars.
2     tsf_bars     = .tsf_bars OR .irac_bars;
1     END;                                     ! End of GCPOS
```

```
                                                         003C 00000         .ENTRY   GCPOS, Save R2,R3,R4,R5             ; 0258
                                        55 00000000G  EF   9E 00002         MOVAB    TSF, R5                             ;
                                        74 00000000G  EF   E8 00009         BLBS     FNCT+20, 2$                         ; 0289
                                        50            65   D0 00010         MOVL     TSF, R0                             ; 0293
                                        52      008C  C0   9E 00013         MOVAB    140(R0), TSF_PHREGS                 ;
                                        05      0088  C0   D1 00018         CMPL     136(R0), #5                         ; 0295
                                                      07   19 0001D         BLSS     1$                                  ;
                             00000000G  EF            00   FB 0001F         CALLS    #0, OUTCRG                          ; 0300
                                        53            65   D0 00026 1$:     MOVL     TSF, R3                             ; 0302
                                        54      0088  C3   9E 00029         MOVAB    136(R3), R4                         ;
                                        50            64   D0 0002E         MOVL     (R4), R0                            ;
                                      6240        04  AC   D0 00031         MOVL     POSITION, (TSF_PHREGS)[R0]          ;
                                        52 00000000G  EF   D0 00036         MOVL     MRA, R2                             ; 0303
                                        51        04  A2   9E 0003D         MOVAB    4(R2), R1                           ;
                                   00   B1       00G  8F   90 00041         MOVB     #RINTES, @0(R1)                     ;
                                                      61   D6 00046         INCL     (R1)                                ;
                                                  0C  A2   D6 00048         INCL     12(R2)                              ;
                                   00   B1        67  8F   90 0004B         MOVB     #103, @0(R1)                        ; 0304
                                                      61   D6 00050         INCL     (R1)                                ;
                                                  0C  A2   D6 00052         INCL     12(R2)                              ;
                                   00   B1            50   90 00055         MOVB     R0, @0(R1)                          ; 0305
                                                      61   D6 00059         INCL     (R1)                                ;
                                                  0C  A2   D6 0005B         INCL     12(R2)                              ;
                                   18   A3            03   C0 0005E         ADDL2    #3, 24(R3)                          ; 0306
                                                      64   D6 00062         INCL     (R4)                                ; 0307
                                   1C   A3 00000000G  FF   D0 00064         MOVL     @SCA+136, 28(R3)                    ; 0308
           50       7C   A3             01            00   EF 0006C         EXTZV    #0, #1, 124(R3), R0                 ; 0309
           51 00000000G  EF             01            00   EF 00072         EXTZV    #0, #1, IRAC, R1                    ;
                                        50            51   88 0007B         BISB2    R1, R0                              ;
      7C   A3            01             00            50   F0 0007E         INSV     R0, #0, #1, 124(R3)                 ;
                                                           04 00084 2$:     RET                                          ; 0310

; Routine Size:  133 bytes,    Routine Base:  $CODE$ + 003D


;  185          0311  1
```

```
    1 GLOBAL ROUTINE gcskip (spacing) : NOVALUE =
    1
    1 !++
    1 ! FUNCTIONAL DESCRIPTION:
    1 !
    1 !       Generate code to skip lines that don't occur at the top
    1 !       of a page.
    1 !
    1 ! FORMAL PARAMETERS:
    1 !
    1 !       spacing - Indicates how many lines are to be skipped.
    1 !
    1 ! IMPLICIT INPUTS:      None
    1 !
    1 ! IMPLICIT OUTPUTS:     None
    1 !
    1 ! ROUTINE VALUE:
    1 ! COMPLETION CODES:     None
    1 !
    1 ! SIDE EFFECTS:         None
    1 !--
    1
    2     BEGIN
    2     LOCAL
    2         tsf_phregs : REF VECTOR [tsf_nregs];
    2
    2     tsf_phregs = tsf__phregs;
    2
    2     IF  .spacing LEQ 0
    2     THEN
    2         RETURN;                     ! Don't generate code for single spacing.
    2
    2     IF  .tsf_next_reg GEQ tsf_nregs     ! Don't allocate too many "registers".
    2     THEN
    2         outcrg ();
    2
    2     tsf_phregs [.tsf_next_reg] = .spacing;
    2     fs_wchar (mra, rintes);
    2
  U 2 %IF DSPPLUS %THEN
  U 2     !
  U 2     ! If collecting topnotes, make the lines unconditional and count them.
  U 2     !
  U 2     IF  .tn_collecting
  U 2     THEN
  U 2         BEGIN
  U 2         fs_wchar (mra, %C'u');
  U 2         tsf_lines = .tsf_lines + .spacing;
  U 2         END
  U 2     ELSE
  U 2         BEGIN
    2 %FI
    2     !
    2     ! If collecting footnotes, make the lines unconditional and count them.
    2     !
    2     IF  .fnct_collecting
    2     THEN
```

```
;  244             0369  3              BEGIN
:  245             0370  3              fs_wchar (mra, %C'u');
:  246             0371  3              tsf_lines = .tsf_lines + .spacing;
:  247             0372  3              END
:  248             0373  2         ELSE
:  249             0374  2              fs_wchar (mra, %C's');
:  250             0375  2
:  251           U 0376  2    %IF DSRPLUS %THEN
:  252           U 0377  2              END;
:  253             0378  2    %FI
:  254             0379  2
:  255             0380  2         fs_wchar (mra, .tsf_next_reg);
:  256             0381  2         tsf_int_vl   = .tsf_int_vl + 3;
:  257             0382  2         tsf_next_reg = .tsf_next_reg + 1;
:  258             0383  2         tsf_bar_char = .sca_bar_char;              ! Propogate change bars.
:  259             0384  2         tsf_bars     = .tsf_bars OR .irac_bars;
;  260             0385  1         END;                                       ! End of GCSKIP



                                             003C 00000        .ENTRY  GCSKIP, Save R2,R3,R4,R5             ; 0312
                             55 00000000G  EF  9E 00002        MOVAB   TSF, R5                              :
                             50              65  D0 00009        MOVL    TSF, R0                              ; 0338
                             52      008C  C0  9E 0000C        MOVAB   140(R0), TSF_PHREGS                  :
                             54        04  AC  D0 00011        MOVL    SPACING, R4                          ; 0340
                                           01  14 00015        BGTR    1$                                   :
                                               04 00017        RET                                          :
                             05      0088  C0  D1 00018 1$:    CMPL    136(R0), #5                          ; 0344
                                           07  19 0001D        BLSS    2$                                   :
             00000000G       EF              00  FB 0001F        CALLS   #0, OUTCRG                           ; 0346
                             50              65  D0 00026 2$:    MOVL    TSF, R0                              ; 0348
                             53      0088  C0  9E 00029        MOVAB   136(R0), R3                          :
                             51              63  D0 0002E        MOVL    (R3), R1                             :
                           6241              54  D0 00031        MOVL    R4, (TSF_PHREGS)[R1]                 :
                             52 00000000G  EF  D0 00035        MOVL    MRA, R2                              ; 0349
                             51        04  A2  9E 0003C        MOVAB   4(R2), R1                            :
                      00     B1       00G  8F  90 00040        MOVB    #RINTES, @0(R1)                      :
                                           61  D6 00045        INCL    (R1)                                 :
                                       0C  A2  D6 00047        INCL    12(R2)                               :
                             10 00000000G  EF  E9 0004A        BLBC    FNCT+20, 3$                          ; 0367
                      00     B1        75  8F  90 00051        MOVB    #117, @0(R1)                         ; 0370
                                           61  D6 00056        INCL    (R1)                                 :
                                       0C  A2  D6 00058        INCL    12(R2)                               :
                      34     A0              54  C0 0005B        ADDL2   R4, 52(R0)                           ; 0371
                                           0A  11 0005F        BRB     4$                                   ; 0367
                      00     B1        73  8F  90 00061 3$:    MOVB    #115, @0(R1)                         ; 0374
                                           61  D6 00066        INCL    (R1)                                 :
                                       0C  A2  D6 00068        INCL    12(R2)                               :
                      00     B1              63  90 0006B 4$:    MOVB    (R3), @0(R1)                         ; 0380
                                           61  D6 0006F        INCL    (R1)                                 :
                                       0C  A2  D6 00071        INCL    12(R2)                               :
                      18     A0              03  C0 00074        ADDL2   #3, 24(R0)                           ; 0381
                                           63  D6 00078        INCL    (R3)                                 ; 0382
                      1C     A0 00000000G  FF  D0 0007A        MOVL    @SCA+136, 28(R0)                     ; 0383
51      7C    A0             01              00  EF 00082        EXTZV   #0, #1, 124(R0), R1                  ; 0384
```

```
         52 00000000G  EF           01           00  EF 00088        EXTZV   #0, #1, IRAC, R2                  ;
                                    51           52  88 00091        BISB2   R2, R1                            ;
     7C   A0              01        00           51  F0 00094        INSV    R1, #0, #1, 124(R0)               ;
                                                     04 0009A        RET                                       ; 0385

; Routine Size:  155 bytes,    Routine Base:  $CODE$ + 00C2

;  261           0386  1
```

```
  1 GLOBAL ROUTINE gtpc (count) : NOVALUE =
  1
  1 !++
  1 ! FUNCTIONAL DESCRIPTION:
  1 !
  1 !       Generates intermediate code for a .TEST PAGE command.
  1 !
  1 ! FORMAL PARAMETERS:
  1 !
  1 !       count - Specifies how many free lines should be tested for.
  1 !
  1 ! IMPLICIT INPUTS:      None
  1 !
  1 ! IMPLICIT OUTPUTS:     None
  1 !
  1 ! ROUTINE VALUE:
  1 ! COMPLETION CODES:     None
  1 !
  1 ! SIDE EFFECTS:         None
  1 !--
  1
  2     BEGIN
  2     LOCAL
  2         tsf_phregs : REF VECTOR [tsf_nregs];
  2
  2     tsf_phregs = tsf__phregs;
  2
  2     !
  2     ! If collecting a footnote, don't bother to do a test page, since
  2     ! the text will fit by definition.
  2     !
  2     IF  .fnct_collecting
  2     THEN
  2         RETURN;
  2
U 2 %IF DSRPLUS %THEN
U 2     !
U 2     ! If collecting a topnote, don't bother to do a test page.
U 2     !
U 2     IF  .tn_collecting
U 2     THEN
U 2         RETURN;
  2 %FI
  2
  2     IF  .tsf_next_reg GEQ tsf_nregs     ! Don't allocate too many "registers".
  2     THEN
  2         outcrg ();
  2
  2     tsf_phregs [.tsf_next_reg] = .count;
  2     fs_wchar (mra, rintes];                         ! If (test page..)
  2     (s_wchar (mra, %C't');
  2     fs_wchar (mra, .tsf_next_reg);
  2     fs_wchar (mra, rintes);                         ! end THEN
  2     fs_wchar (mra, %C'.');
  2     fs_wchar (mra, %C' ');
  2     fs_wchar (mra, rintes);                         ! else (page..)
  2     fs_wchar (mra, %C'p');
```

```
;   320          0444   2     fs_wchar (mra, %C' ');
;   321          0445   2     fs_wchar (mra, rintes);                     ! end ELSE
;   322          0446   2     fs_wchar (mra, %C'.');
;   323          0447   2     fs_wchar (mra, %C' ');
;   324          0448   2     tsf_int_vl   = .tsf_int_vl + 12;
;   325          0449   2     tsf_next_reg = .tsf_next_reg + 1;
;   326          0450   2     tsf_bar_char = .sca_bar_char;               ! Propogate change bars.
;   327          0451   2     tsf_bars     = .tsf_bars OR .irac_bars;
;   328          0452   1     END;                                        ! End of GTPC



                                       003C  00000          .ENTRY   GTPC, Save R2,R3,R4,R5                          ; 0387
                55 00000000G     EF    9E  00002          MOVAB    TSF, R5                                         :
                50               65    D0  00009          MOVL     TSF, R0                                         ; 0412
                52      008C     C0    9E  0000C          MOVAB    140(R0), TSF_PHREGS                             :
                01 00000000G     EF    E9  00011          BLBC     FNCT+20, 1$                                     ; 0418
                                       04  00018          RET                                                      :
                05      0088     C0    D1  00019  1$:     CMPL     136(R0), #5                                     ; 0431
                                 07    19  0001E          BLSS     2$                                              :
       00000000G  EF             00    FB  00020          CALLS    #0, OUTCRG                                      ; 0433
                50               65    D0  00027  2$:     MOVL     TSF, R0                                         ; 0435
                54      0088     C0    9E  0002A          MOVAB    136(R0), R4                                     :
                53               64    D0  0002F          MOVL     (R4), R3                                        :
              6243        04     AC    D0  00032          MOVL     COUNT, (TSF_PHREGS)[R3]                         :
                51 00000000G     EF    D0  00037          MOVL     MRA, R1                                         ; 0436
                52        04     A1    9E  0003E          MOVAB    4(R1), R2                                       :
           00   B2       00G     8F    90  00042          MOVB     #RINTES, @0(R2)                                 :
                                 62    D6  00047          INCL     (R2)                                            :
                51               0C    C0  00049          ADDL2    #12, R1                                         :
                                 61    D6  0004C          INCL     (R1)                                            :
           00   B2        74     8F    90  0004E          MOVB     #116, @0(R2)                                    ; 0437
                                 62    D6  00053          INCL     (R2)                                            :
                                 61    D6  00055          INCL     (R1)                                            :
           00   B2               53    90  00057          MOVB     R3, @0(R2)                                      ; 0438
                                 62    D6  0005B          INCL     (R2)                                            :
                                 61    D6  0005D          INCL     (R1)                                            :
           00   B2       00G     8F    90  0005F          MOVB     #RINTES, @0(R2)                                 ; 0439
                                 62    D6  00064          INCL     (R2)                                            :
                                 61    D6  00066          INCL     (R1)                                            :
           00   B2               2E    90  00068          MOVB     #46, @0(R2)                                     ; 0440
                                 62    D6  0006C          INCL     (R2)                                            :
                                 61    D6  0006E          INCL     (R1)                                            :
           00   B2               20    90  00070          MOVB     #32, @0(R2)                                     ; 0441
                                 62    D6  00074          INCL     (R2)                                            :
                                 61    D6  00076          INCL     (R1)                                            :
           00   B2       00G     8F    90  00078          MOVB     #RINTES, @0(R2)                                 ; 0442
                                 62    D6  0007D          INCL     (R2)                                            :
                                 61    D6  0007F          INCL     (R1)                                            :
           00   B2        70     8F    90  00081          MOVB     #112, @0(R2)                                    ; 0443
                                 62    D6  00086          INCL     (R2)                                            :
                                 61    D6  00088          INCL     (R1)                                            :
           00   B2               20    90  0008A          MOVB     #32, @0(R2)                                     ; 0444
                                 62    D6  0008E          INCL     (R2)                                            :
                                 61    D6  00090          INCL     (R1)                                            :
                                  00   B2       00G  8F  90 00092         MOVB    #RINTES, @0(R2)                            ; 0445
                                                     62  D6 00097         INCL    (R2)                                       ;
                                                     61  D6 00099         INCL    (R1)                                       ;
                                  00   B2            2E  90 0009B         MOVB    #46, @0(R2)                                ; 0446
                                                     62  D6 0009F         INCL    (R2)                                       ;
                                                     61  D6 000A1         INCL    (R1)                                       ;
                                  00   B2            20  90 000A3         MOVB    #32, @0(R2)                                ; 0447
                                                     62  D6 000A7         INCL    (R2)                                       ;
                                                     61  D6 000A9         INCL    (R1)                                       ;
                                  18   A0            0C  C0 000AB         ADDL2   #12, 24(R0)                                ; 0448
                                                     64  D6 000AF         INCL    (R4)                                       ; 0449
                                  1C   A0 00000000G  FF  D0 000B1         MOVL    @SCA+136, 28(R0)                           ; 0450
           51       7C   A0            01            00  EF 000B9         EXTZV   #0, #1, 124(R0), R1                        ; 0451
           52 00000000G  EF            01            00  EF 000BF         EXTZV   #0, #1, IRAC, R2                           ;
                                       51            52  88 000C8         BISB2   R2, R1                                     ;
      7C   A0            01            00            51  F0 000CB         INSV    R1, #0, #1, 124(R0)                        ;
                                                         04 000D1         RET                                                ; 0452

; Routine Size:  210 bytes,    Routine Base:  $CODE$ + 015D


;  329          0453  1
```

```
  1 GLOBAL ROUTINE guskip (spacing) : NOVALUE =
  1
  1 !++
  1 ! FUNCTIONAL DESCRIPTION:
  1 !
  1 !       Generates code to skip unconditionally a number of lines.
  1 !
  1 ! FORMAL PARAMETERS:
  1 !
  1 !       spacing - Indicates how many lines should be skipped.
  1 !
  1 ! IMPLICIT INPUTS:      None
  1 !
  1 ! IMPLICIT OUTPUTS:     None
  1 !
  1 ! ROUTINE VALUE:
  1 ! COMPLETION CODES:     None
  1 !
  1 ! SIDE EFFECTS:         None
  1 !--
  1
  2     BEGIN
  2     LOCAL
  2         tsf_phregs : REF VECTOR [tsf_nregs];
  2
  2     tsf_phregs = tsf__phregs;
  2
  2     IF  .spacing LEQ 0
  2     THEN
  2         RETURN;                     ! Don't generate code for single spacing.
  2
  2     IF  .tsf_next_reg GEQ tsf_nregs     ! Don't allocate too many "registers".
  2     THEN
  2         outcrg ();
  2
  2     tsf_phregs [.tsf_next_reg] = .spacing;
  2     fs_wchar (mra, rintes);
  2     fs_wchar (mra, %C'u');
  2     fs_wchar (mra, .tsf_next_reg);
  2     tsf_int_vl   = .tsf_int_vl + 3;
  2     tsf_next_reg = .tsf_next_reg + 1;
  2     tsf_bar_char = .sca_bar_char;               ! Propogate change bars.
  2     tsf_bars     = .tsf_bars OR .irac_bars;
  2
  2     !
  2     ! If collecting a footnote, count the number of lines to be generated.
  2     !
  2     IF  .fnct_collecting
  2     THEN
  2         tsf_lines = .tsf_lines + .spacing;
  2
U 2 %IF DSRPLUS %THEN
U 2     !
U 2     ! If collecting a topnote, count the number of lines to be generated.
U 2     !
U 2     IF  .tn_collecting
U 2     THEN
```

```
;  388        U 0511  2            tsf_lines = .tsf_lines + .spacing;
;  389          0512  2 %FI
;  390          0513  2
;  391          0514  1        END;                                          ! End of GUSKIP



                                                       007C 00000          .ENTRY  GUSKIP, Save R2,R3,R4,R5,R6      ; 0454
                                    56 00000000G   EF    9E 00002          MOVAB   TSF, R6                          ;
                                    50             66    D0 00009          MOVL    TSF, R0                          ; 0479
                                    52      008C   C0    9E 0000C          MOVAB   140(R0), TSF_PHREGS              ;
                                    55        04   AC    D0 00011          MOVL    SPACING, R5                      ; 0481
                                                   76    15 00015          BLEQ    2$                               ;
                                    05      0088   C0    D1 00017          CMPL    136(R0), #5                      ; 0485
                                                   07    19 0001C          BLSS    1$                               ;
                          00000000G EF             00    FB 0001E          CALLS   #0, OUTCRG                       ; 0487
                                    51             66    D0 00025 1$:      MOVL    TSF, R1                          ; 0489
                                    54      0088   C1    9E 00028          MOVAB   136(R1), R4                      ;
                                    53             64    D0 0002D          MOVL    (R4), R3                         ;
                                  6243             55    D0 00030          MOVL    R5, (TSF_PHREGS)[R3]             ;
                                    50 00000000G   EF    D0 00034          MOVL    MRA, R0                          ; 0490
                                    52        04   A0    9E 0003B          MOVAB   4(R0), R2                        ;
                              00    B2       00G   8F    90 0003F          MOVB    #RINTES, @0(R2)                  ;
                                                   62    D6 00044          INCL    (R2)                             ;
                                              0C   A0    D6 00046          INCL    12(R0)                           ;
                              00    B2        75   8F    90 00049          MOVB    #117, @0(R2)                     ; 0491
                                                   62    D6 0004E          INCL    (R2)                             ;
                                              0C   A0    D6 00050          INCL    12(R0)                           ;
                              00    B2             53    90 00053          MOVB    R3, @0(R2)                       ; 0492
                                                   62    D6 00057          INCL    (R2)                             ;
                                              0C   A0    D6 00059          INCL    12(R0)                           ;
                              18    A1             03    C0 0005C          ADDL2   #3, 24(R1)                       ; 0493
                                                   64    D6 00060          INCL    (R4)                             ; 0494
                              1C    A1 00000000G   FF    D0 00062          MOVL    @SCA+136, 28(R1)                 ; 0495
         50        7C  A1           01             00    EF 0006A          EXTZV   #0, #1, 124(R1), R0              ; 0496
         52 00000000G  EF           01             00    EF 00070          EXTZV   #0, #1, IRAC, R2                 ;
                                    50             52    88 00079          BISB2   R2, R0                           ;
    7C   A1            01           00             50    F0 0007C          INSV    R0, #0, #1, 124(R1)              ;
                                    04 00000000G   EF    E9 00082          BLBC    FNCT+20, 2$                      ; 0501
                              34    A1             55    C0 00089          ADDL2   R5, 52(R1)                       ; 0503
                                                         04 0008D 2$:      RET                                      ; 0514

; Routine Size:  142 bytes,    Routine Base:  $CODE$ + 022F


;  392          0515  1
;  393          0516  1 END                                                  ! End of module
;  394          0517  0 ELUDOM




;                            PSECT SUMMARY
```

```
;
;      Name                       Bytes                          Attributes
;
;  $CODE$                              701  NOVEC,NOWRT,  RD ,  EXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)



;                             Library Statistics
;
;                                             -------- Symbols --------       Pages        Processing
;      File                                   Total    Loaded   Percent       Mapped       Time
;
;  _$255$DUA28:[SYSLIB]XPORT.L32;1              590         0         0         252          00:00.1
;  _$255$DUA28:[RUNOFF.SRC]DSRLIB.L32;1        1248        28         2          86          00:00.3




;                                     COMMAND QUALIFIERS

;      BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:GCODE/OBJ=OBJ$:GCODE MSRC$:GCODE/UPDATE=(ENH$:GCODE)

; Size:          701 code + 0 data bytes
; Run Time:         00:15.6
; Elapsed Time:     00:38.3
; Lines/CPU Min:     1994
; Lexemes/CPU-Min: 26477
; Memory Used:  103 pages
; Compilation Complete
```

0341 AH-BT13A-SE
VAX/VMS V4.0

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FIND
LIS

ENDWRD
LIS

ERROR
LIS

FIGURE
LIS

FLGSEM
LIS

FOOFIL
LIS

GCODE
LIS

FCIMRA
LIS

FNONLY
LIS

FUNFNU
LIS

FOOBOT
LIS

GBLDCL
LIS

FNDFLG
LIS

FOOOUT
LIS

FORMAT
LIS

0342 AH-BT13A-SE
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GETQC
LIS

GNAME
LIS

INDEX
LIS

GLBDAT
LIS

GETLIN
LIS

GETONE
LIS

LAYOUT
LIS

GTABS
LIS

GLNM
LIS

GETQS'
LIS

IFIFNE
LIS

GETDD
LIS

GSLU
LIS

LIT
LIS

LIST
LIS

GETNUM
LIS

HEADER
LIS